

Application No.: 10/791,696Docket No.: 2336-250**REMARKS**

Reconsideration and allowance of the subject application in view of the foregoing amendments and the following remarks is respectfully requested. Entry of this Amendment under Rule 116 is merited as it raises no new issues and requires no further search.

Claims 15-27 are pending in the application. Claims 1-7 have been cancelled without prejudice or disclaimer. Claims 15-27 remain unchanged notwithstanding the Examiner's *35 U.S.C. 112, first paragraph* rejection. The specification has been revised to correct a typographical error. No new matter has been introduced through the foregoing amendments.

The Examiner's objection to the drawings for failing to show the "actuator" of claim 1 is moot as claim 1 has been cancelled. It should be noted that the cancellation of claim 1 has been made solely for the purpose of expediting prosecution and is not necessitated by the Examiner's objection. In particular, FIG. 3G clearly shows an actuator 70 being formed in a predetermined region of silicon layer 50 as recited in the claim. It should further be noted that although element 70 is referred to as a "driving part" at page 15, line 23, page 16, line 1 of the specification, element 70 is the same as actuator 150, as disclosed at page 16, lines 2-3, i.e., "As the driving part 70, an actuator 150 is formed as shown in FIG. 1." The disclosure at page 16, lines 2-3 explicitly requires that driving part 70 and actuator 150 be one and the same. Thus, element 70 is an actuator and FIG. 3G shows the feature.

Withdrawal of the drawing objection in view of the above is believed appropriate and therefore courteously solicited.

The Examiner's "new matter" objection to the specification and the *35 U.S.C. 112, first paragraph* rejection of claims 15-27 are noted, and will be addressed together. Specifically, Applicants respectfully submit that the last Amendment did not introduce new matter into the original disclosure, and that claims 15-27 find solid support in the application as filed.

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The Examiner held that the original disclosure discloses that the silicon layer carries the fixed waveguides, rather than the moveable waveguide as presently claimed. Applicants respectfully disagree for the following reasons.

The original disclosure does not *explicitly* disclose that it is the fixed waveguides that are carried by the silicon layer. In particular, the relevant elements, i.e., waveguides 60 carried by silicon layer 50, are not explicitly disclosed to be the fixed waveguides.

The original disclosure does not *implicitly* disclose the alleged feature, either. The Examiner basically argued that since the original disclosure discloses that the photosensitive structures/cavities have substantially the same size as the waveguides connected to optical transmission lines, i.e., fixed waveguides, it must be the fixed waveguides that are received in the so formed cavities. Applicants respectfully disagree, because the mere fact that the fixed waveguides *can* be fit inside the cavities does not *necessarily* mean that the fixed waveguides are indeed inserted in the cavities.

Applicants further respectfully submit that a person of ordinary skill in the art, upon considering the original disclosure *as a whole*, would recognize that it is the moveable waveguides that are inserted in the cavities. This claimed feature finds support in both the specification and drawings as filed.

In particular, the original disclosure provides *explicit* support for the claimed feature. More specifically, the specification, at page 3, lines 14-17, discloses that actuator 150 is arranged between fixed waveguides 130 for moving moveable waveguide 140. The specification, at page 16, lines 2-3, further discloses that elements 70 and 150 are one and the same. Since element 150 is an actuator, element 70 must also be an actuator. Therefore, waveguides 60 carried by actuator 70 must be moveable waveguides like waveguide 140 carried by actuator 150.

The original disclosure also provides *implicit* support for the claimed feature. More

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specifically, the disclosure at pages 3-6 discusses several problems (page 5, line 7 through page 6, line 5) of the conventional device. Some of the problems are identified to be associated with the direct bonding of the actuator (150), which is arranged to carry and move the moveable waveguide (140, page 3, lines 15-17) and is formed as a thin silicon membrane (page 3, lines 21-22 and page 5, lines 3-6), to a glass or silicon substrate (page 4, lines 4-5 and page 5, line 1). The original disclosure further states in the Summary of the Invention section (page 6, lines 9-16) that the problems can be cured by proving a bonding medium layer (30) between the actuator structure (70) and the support structure (40). See also the specification at page 13, lines 5-10, page 15, lines 3-9, and page 16, lines 2-3. A person of ordinary skill in the art would at once recognize that the actuator structure mentioned in the Summary of the Invention section and further detailed in the description of the disclosed embodiment of the present invention corresponds to the actuator (150/210) in the conventional device, whereas the supporting structure mentioned in the Summary of the Invention section and further detailed in the description of the disclosed embodiment of the present invention corresponds to the glass/silicon substrate in the conventional device; the difference being the bonding between the actuator and substrate, i.e., the indirect bonding via a bonding medium mentioned in the Summary of the Invention section and further detailed in the description of the disclosed embodiment of the present invention versus the direct bonding in the conventional device. Since the actuator structure mentioned in the Summary of the Invention section and further detailed in the description of the disclosed embodiment of the present invention corresponds to the actuator (150/210) in the conventional device, the person of ordinary skill in the art would understand that the actuator structure (70/50) mentioned in the Summary of the Invention section and further detailed in the description of the disclosed embodiment of the present invention also carries moveable waveguides (60). The person of ordinary skill in the art would come to the same conclusion upon considering the disclosure (page 16, lines 2-5) that driving part 70/actuator 150 is moveable when a voltage is applied thereto, because such driving part/actuator 70/150 would not be moveable as disclosed if the waveguides that it carries were fixed.

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Withdrawal of the new matter objection and 35 U.S.C. 112, first paragraph rejection of claims 15-27 in view of the above is now believed appropriate and therefore courteously solicited.

The art rejections of claims 1-7 are moot as the rejected claims have been canceled.

Each of the Examiner's rejections has been traversed/overcome. Accordingly, Applicants respectfully submit that all claims in the present application, namely, claims 15-27, are now in condition for allowance, and early indication of same is respectfully requested.

The Examiner is invited to telephone the undersigned, Applicant's attorney of record, to facilitate advancement of the present application.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 07-1337 and please credit any excess fees to such deposit account.

Respectfully submitted,

LOWE HAUPTMAN & BERNER, LLP

Benjamin J. Hauptman
Registration No. 29,310

USPTO Customer No. 22429
1700 Diagonal Road, Suite 310
Alexandria, VA 22314
(703) 684-1111 BJH/KL/kb
(703) 518-5499 Facsimile
Date: July 7, 2005

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